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EXAMINER

MAI, KEVIN S

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/708,260	Applicant(s) ABRAMSON ET AL.	
	Examiner KEVIN S. MAI	Art Unit 2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/9/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action has been issued in response to Applicant's Request for Continued Examination filed April 9, 2008.
2. Claims 1-18 have been examined and are pending.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 9, 2008 has been entered.

Response to Arguments

4. Applicant's arguments filed April 9, 2008 have been fully considered but they are not persuasive.
5. Applicant's arguments with respect to claims 1-3, 5-6, 8-13 and 15-18 have been considered but are not persuasive. Applicant argues that Singal fails to disclose the limitation 'retrieving a remainder of the content file in response to displaying the retrieved portion of the content file'. Examiner maintains that Singal does disclose this limitation. Applicant points to an area in Singal's abstract to suggest that Singal does not disclose the limitation, however the portion of Singal that was recited in the previous action does disclose the limitation. Namely

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figure 5, column 6 lines 50-67 and column 7 lines 1-20 disclose this. In figure 5 it is seen that step 152 begins the process when a user requests the Video Content Delivery, then after which the status of the video requested is analyzed (steps 156, 158, 160, 162, 164, 170 and 172), then in step 166 the suffix (remainder of the content file) is loaded (retrieved), and then in step 168 the video begins to stream (display) to the user. Column 7 lines 5-6 then disclose that while steps 166 (the suffix being retrieved) and steps 168 (streaming/displaying the video to the user) are shown in sequential order, **streaming in step 168 may also begin before** or concurrently with step 166. Thus in the disclosed scenario where step 168 happens before 166 it is seen that the after the video is requested the video would begin streaming/displaying. After the displaying has begun, step 166 would occur which is loading/retrieving the suffix (remainder of the file). It is seen then that the suffix is being loaded in response to the displaying of the retrieved portion of the video content. Thus it is seen that Singal discloses the limitation of the applicant's invention and for these reasons examiner maintains the previous rejections.

6. Applicant's arguments with respect to claims 4, 7 and 14 have been considered but are not persuasive. Applicant argues that claims 4, 7 and 14 incorporate the subject matter of claims 1 and 10 and as such are patentable. However for the reasons stated above with respect to claims 1 and 10, examiner maintains the previous rejections.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 1 – 3, 5 – 6, 8 – 13, and 15 – 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 6859840 to Singal et al. (hereinafter “Singal”) and further in view of U.S. Pub. No. 2001/0029523 A1 to McTernan et al. (hereinafter “McTernan”).

As to Claim 1, Singal teaches **a client system for efficiently downloading a page of broadband content including at least one content file, the client system comprising** (Abstract of Singal discloses a system for delivering media objects to a user over a computer network):

a mass storage device (Column 7 lines 35 – 45 of Singal discloses a mass storage device, such as a disk drive, that may be used to provide storage for computer programs, media objects and associated files);

Singal does not teach but McTernan teaches **a bandwidth measurement device** (Paragraph [0045] of McTernan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client). Singal teaches **determining during retrieval a bandwidth of a network connection over which a content file is downloaded** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.

It is noted that Singal teaches the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also teaches preloading prefixes on the edge server prior to a request. Although it is not explicitly

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taught to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

Singal does not teach but Mcternan teaches **a download manager** (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager). Singal teaches **retrieving and storing in the mass storage device a portion of the content file, the download manager establishing a size of the portion to retrieve responsive to the determination made by the bandwidth measurement device** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size); **and**

Singal does not teach but Mcternan teaches **a presentation manager retrieving the portion of the content file from mass storage and displaying the portion with a standard media player application** (Paragraph [0101] of Mcternan discloses data contained in the Agent's buffer is decoded and passed to appropriate Renderer's to produce output to the viewer. In here taking the

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data from the buffer reads on the retrieving the content file and passing it to an appropriate renderer is the same as displaying on a media player application),

Singal teaches **wherein the download manager retrieves a remainder of the content file in response to the presentation manager displaying the retrieved portion of the content file**

(Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine downloading a prefix based on bandwidth as taught by Singal, with the media player client system (bandwidth measurement device, download manager, and presentation manager) as taught by McTernan.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order provide a system on which Singal's method of downloading a prefix could work. The components taught by McTernan are not explicitly taught in Singal, however using these components with Singal's method would be obvious. This is because the components are implied by the method. The bandwidth measurement device is implied because Singal talks of taking bandwidth measurements and as such it would be obvious to have a component to do this. Similarly, the download manager is implied by Singal's invention because it deals with downloading files and making decisions on continuing downloads or terminating them. Finally,

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the presentation manager would be inherent in any system claiming to display media objects because without one there would be no purpose to distribute the media in the first place. Thus it is seen that it would be obvious to combine Singal and McTernan.

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

As to Claim 2, Singal and McTernan teach **the client system of claim 1 wherein the bandwidth measuring device makes a second determination of the bandwidth of the network connection over which the content file is retrieved , and the download manager responsive to the second determination establishes a second size for the portion of the content file to retrieve** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario in which not enough of a prefix has been cached at the edge server. This initial prefix is the prefix that would have been calculated in claim 1. When a video is requested the bandwidth needed to playback the video smoothly is calculated based on the current prefix size and the size of the whole file (step 170). It then measures the bandwidth to see if enough is available (step 172). If not enough bandwidth is available it goes onto steps 158 and 160 which

involve measuring the bandwidth and computing a new prefix size. This is seen to be the same as a second bandwidth determination establishing a second size of the content file).

As to Claim 3, Singal and McTernan teach **the client system of claim 1 wherein the bandwidth measurement device uses a timer data value, a total size of the portion, and a current progress of the retrieval of the portion to determine when the download manager has downloaded a sufficient portion of the content file such that the download manager would be able to download the remainder of the data file before the player application finishes playing the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose computing the prefix size in such a fashion such that starvation is avoided (step 160). The formula used is $p' = T(1 - R/B)$ where p' is the prefix size calculated to be downloaded, T is the total size of the file, B is the file bit rate, and R is the transfer rate of the file. Then in steps 162 and 164 data (d) is loaded until $d \geq p'$. Thus the two rates, R and B , are seen to be equivalent to the timer data value, the total size is considered in T , and the current progress is seen to be the same as d).

As to Claim 5, Singal and McTernan teach **the client system of claim 1 wherein the bandwidth measurement device and the download manager comprise a single process** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose measuring the bandwidth in order to load the correct amount of data. This is seen to be having the bandwidth measurement and downloading happening within a single process. As such it would be obvious

to have the bandwidth measurement device and the download manager taught by Mcternan to be a single process).

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See KSR v. Teleflex, 550 U.S. ___, 127 S. Ct. 1727 (2007).

As to Claim 6, Singal and Mcternan teach **the client system of claim 1 wherein the download manager comprises a thread process** (Making a program a thread process is a well-known and thoroughly documented idea. Threaded processes have the advantage that they can perform several tasks concurrently without the extra overhead needed to create a new process. Since making a program into a threaded process would tend to make it faster to execute it would be obvious to one of ordinary skill in the art at the time of invention to improve the download manager by making it a threaded process).

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure

to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

As to Claim 8, Singal and McTernan teach **the client system of claim 1 wherein the download manager continues retrieving the remainder of the content file prior to the presentation manager displaying the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario where the file is already fully available. This inherently teaches the idea of retrieving the rest of the file prior to display. However it is further shown that even in the scenario where the file has not already been fully downloaded Singal states the steps 166 and 168 (loading the suffix and streaming) can happen either sequentially in any order or simultaneously. Thus it is seen that loading the suffix before streaming is supported).

As to Claim 9, Singal and McTernan teach **the client system of claim 1 wherein the presentation manager comprises a Windows Media Player application** (Column 6 lines 20 – 25 of Singal discloses using Windows Media Server to provide the streaming media. This would imply the usage of the Window Media Player on the client side).

As to Claim 10, Singal teaches **a method for efficiently downloading a page of broadband content including at least one content file, the method comprising the steps of**

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(Abstract of Singal discloses a system for delivering media objects to a user over a computer network):

(a)retrieving, by Singal does not teach but Mcternan teaches **a download manager** (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager). Singal teaches **a content file** (Column 6 lines 50 – 55 Singal discloses a user connected to an edge server requests delivery of a media object associated with a URL);

(b)determining, by Singal does not teach but Mcternan teaches **a bandwidth measurement device** (Paragraph [0045] of Mcternan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client). Singal teaches **during retrieval a bandwidth of a network connection over which the content file is retrieved** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.

It is noted that Singal teaches the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also

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teaches preloading prefixes on the edge server prior to a request. Although it is not explicitly taught to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

(c)establishing, by the download manager a size of a portion of the content file to retrieve responsive to the bandwidth determination by the bandwidth measurement device (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size);

(d)terminating, by the download manager retrieval of the content file upon receiving the established size of the portion of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose in step 162 only loading data until the data amount is greater than or equal to the prefix size);

(e)displaying with a standard media player application the retrieved portion of the content file (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream); **and**

(f)retrieving, in response to step (e), the remainder of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Examiner recites the same rationale to combine used in claim 1.

As to Claim 11, Singal and McTernan teach **the method of claim 10 further comprising making, by the bandwidth measurement device, a second determination of the bandwidth of a network connection over which the content file is retrieved during retrieval and establishing, by the download manager responsive to the bandwidth measurement device, a second size of the portion of the content file to retrieve** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario in which not enough of a prefix has been cached at the edge server. This initial prefix is the prefix that would have been calculated in claim 1. When a video is requested the bandwidth needed to playback the video smoothly is calculated based on the current prefix size and the size of the whole file (step 170). It then measures the bandwidth to see if enough is available (step 172). If not enough bandwidth is available it goes onto steps 158 and 160 which involve measuring the bandwidth and computing

a new prefix size. This is seen to be the same as a second bandwidth determination establishing a second size of the content file).

As to Claim 12, Singal and McTernan teach **the method of claim 10 further comprising using, by the bandwidth measurement device, a timer data value, a total size of the retrieval, and a current progress of the portion retrieved to determine when the download manager has downloaded a sufficient portion of the content file such that the download manager is able to download the remainder of the data file before the player application finishes playing the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose computing the prefix size in such a fashion such that starvation is avoided (step 160). The formula used is $p' = T(1 - R/B)$ where p' is the prefix size calculated to be downloaded, T is the total size of the file, B is the file bit rate, and R is the transfer rate of the file. Then in steps 162 and 164 data (d) is loaded until d is $\geq p'$. Thus the two rates, R and B , are seen to be equivalent to the timer data value, the total size is considered in T , and the current progress is seen to be the same as d).

As to Claim 13, Singal and McTernan teach **the method of claim 10 wherein the download manager continues retrieving the remainder of the content file prior to the presentation manager displaying the portion of the content file from mass storage** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose a scenario where the file is already fully available. This inherently teaches the idea of retrieving the rest of the file prior to display. However it is further shown that even in the scenario where the file has not already

been fully downloaded Singal states the steps 166 and 168 (loading the suffix and streaming) can happen either sequentially in any order or simultaneously. Thus it is seen that loading the suffix before streaming is supported).

As to Claim 15, Singal and McTernan teach **the method of claim 10 wherein step (f) comprises retrieving, in response to step (e), the remainder of the content file from** Singal and McTernan as applied to claim 10 above do not teach but McTernan teaches **a multicast network** (Paragraph [0042] of McTernan discloses that in preferred embodiments, the client device works in a highly autonomous manner, thereby allowing the server to use multicast techniques to distribute data to many clients simultaneously).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of claim 10 as taught by Singal and McTernan, with utilizing multicast as taught by McTernan.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order to more efficiently distribute its media. Using multicast networks is well known to allow for more efficient usage of bandwidth and thus would reduce the system traffic of Singal's invention.

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of

ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

As to Claim 16, Singal and McTernan teach **the method of claim 10 further comprising the step of displaying with a standard media player application the remainder of the content file** (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream).

As to Claim 17, Singal and McTernan teach **the method of claim 10 wherein step (e) and step (f) occur substantially concurrently** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

As to Claim 18, Singal and McTernan teach **an article of manufacture having embodied thereon computer-readable program means for efficiently downloading a page of broadband content including a first content file and a second content file, the article of manufacture comprising** (Abstract of Singal discloses a system and computer readable medium for delivering media objects to a user over a computer network):

computer-readable program means for retrieving a content file (Column 6 lines 50 – 55

Singal discloses a user connected to an edge server requests delivery of a media object associated with a URL);

computer-readable program means for determining during retrieval by Singal does not teach but McTernan teaches **a bandwidth measurement device** (Paragraph [0045] of McTernan discloses that the server receives data indicating the available bandwidth for transmission of the presentation to the client, such as from a benchmarking program running on the client. The benchmarking program can measure various parameters, including bandwidth between the server and client). Singal teaches **a bandwidth of a network connection over which the content file is retrieved** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size. Thus it is seen that during the retrieval of the prefix the bandwidth is being measured.

It is noted that Singal teaches the measurement of the prefix based on bandwidth in the scenario where the file is unavailable on the edge server at the time of a request. However Singal also teaches preloading prefixes on the edge server prior to a request. Although it is not explicitly taught to measure the size of the preloaded prefix based on the bandwidth, it would be obvious to apply the same logic used for the scenario in which the file is unavailable to calculate these prefix sizes. This idea of using the bandwidth for the preloaded prefixes is further supported in Singal in column 5 lines 55 – 65 which states the prefix is distributed to the edge server wherein

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the prefix size can be determined manually or automatically based on network capacity and/or other conditions. Which is read to imply the usage of bandwidth measurement to determine the amount sent);

computer-readable program means for determining a size of the portion of the content file to be retrieved responsive to the bandwidth measurement determination (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose querying the available bandwidth (step 158) and then computing a prefix size according to this bandwidth (step 160). Then the system begins to load data until the size of the data is greater than or equal to the calculated prefix size);

computer-readable program means for termination, by Singal does not teach but Mcternan teaches **the download manager** (Paragraph [0070] of Mcternan discloses a Media Player containing several components or systems including a Download Manager). Singal teaches, **retrieval of the content file upon receiving of the established size of the portion of the content file** (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose in step 162 only loading data until the data amount is greater than or equal to the prefix size);

computer-readable program means for displaying with a standard media player application the retrieved portion of the content file (Column 6 lines 45 – 50 of Singal disclose using QuickTime to play the video stream); **and**

computer-readable program means for retrieving, in response to displaying with a standard media player application the retrieved portion of the content file, the remainder of the content file (Figure 5, column 6 lines 50 – 67, and column 7 lines 1 – 20 of Singal disclose that in steps 166 the suffix is loaded in parallel and in step 168 streaming begins. It is clarified that although steps 166 and 168 are shown sequentially, streaming in step 168 may also begin before or concurrently with step 166).

Examiner recites the same rationale to combine used in claim 1.

10. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singal and McTernan as applied to claim 1 above, and further in view of the Dictionary of Computer Science, Engineering, and Technology by Phillip A. Laplante (hereinafter “dictionary”).

As to Claim 4, Singal and McTernan teach **the client system of claim 1**. Singal and McTernan do not teach but the dictionary teaches **wherein the bandwidth measurement device comprises a timer** (The dictionary defines bandwidth performance analysis as ‘bandwidth represents the maximum rate at which a given device can perform.’ Rate is a function of time and thus inherently the measurement of bandwidth would need a timer of sorts).

Given that Singal and McTernan propose determining bandwidth it would be reasonable to say that a timer would be used during this determination. As such it would be obvious to one of ordinary skill in the art, at the time of invention, to use a timer to measure bandwidth.

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"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

11. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singal and McTernan as applied to claim 1 above, and further in view of U.S. Pat. No. 5568181 to Greenwood et al. (hereinafter "Greenwood").

As to Claim 7, Singal and McTernan teach **the client system of claim 1**. Singal and McTernan do not teach but Greenwood teaches **wherein the bandwidth measurement device determines the bandwidth of the network connection over which the content file is retrieved prior to the retrieval of the portion of the content file** (Column 7 lines 40 – 65 and figure 5 of Greenwood disclose finding the size of the preface needed to avoid starvation of a file. It explains that it contains an area where information that is used to calculate the preface is continually updated, including the rate at which a file can be transmitted through the network from library to local cache. This is seen as determining the bandwidth prior to retrieval since the measurement is taken for future use and not immediate use).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the system of claim 1 as taught by Singal and McTernan, with measuring the bandwidth in advance as taught by Greenwood.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order to streamline the process such that the measurement would not need to be taken each time the file was requested but instead would be readily available at the time of request.

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

12. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singal and McTernan as applied to claim 10 above, and further in view of U.S. Pub. No. 2004/0128343 to Mayer (hereinafter "Mayer").

As to Claim 14, Singal and McTernan teach **the method of claim 10 wherein step (f) comprises retrieving, in response to step (e), the remainder of the content file** but do not teach but Mayer teaches **from a peer-to-peer network** (Paragraph [0047] of Mayer teaches that

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in another preferred embodiment, program segments A are shared by end-users, interconnected by broadband, through peer-to-peer technology).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of claim 10 taught by Singal and McTernan, with using a peer-to-peer network taught by Mayer.

One of ordinary skill in the art at the time the invention was made would have been motivated to combine in order to reduce the overhead of the provider and be able to more efficiently use their own bandwidth.

"Common sense teaches, however, that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle...When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense." See *KSR v. Teleflex*, 550 U.S. ___, 127 S. Ct. 1727 (2007).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KEVIN S. MAI whose telephone number is (571)270-5001. The examiner can normally be reached on Monday through Friday 7:30 - 5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on 571-272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KSM

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2146